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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
TRAN, THUAN Q	
ART UNIT	PAPER NUMBER
3693	

MAIL DATE	DELIVERY MODE
04/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/014,919	BAKER ET AL.	
	Examiner	Art Unit	
	Thuan Tran	3693	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2-19-2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-30 and 34-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-30 and 34-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-19-2009 has been entered.

Status of Claims

2. This action is in reply to the amendment filed on 2-19-2009.

3. Claims 11, 14, 16-22, 28, 29, 34, 37-40, 42-47, and 49-51 are currently amended.

4. Claims 12, 13, 15, 23-27, 30, 35, 36, 41, and 48 are previously presented.

5. Claims 11-30 and 34-51 are currently pending and have been examined.

Priority

6. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

Claims 17-30 and 37-51 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on Supreme Court precedent, a proper process must be tied to another statutory class or transform underlying subject matter to a different state or thing (Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780,787-88 (1876)). The independent claim states method steps such as “receiving" and "outputting." However this is not sufficient to tie the process claim to a particular apparatus in another statutory class. To qualify as a statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus that accomplished the method steps (In re Bilski, 545 F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 11-30 and 34-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Podrazhansky, US 2002/0052770 in view of Castonguay et al., US Patent 5,911,134.

9. **As per claims 1, 17, 34, 37, 43, and 50:**

Podrazhansky teaches:

- data representative of tasks and resources for a project (0034-0035);
- generating a proposed schedule of tasks for the project responsive to fluctuations of resources utilized to perform the tasks (0034-0035);
- evaluating the proposed schedule to estimate an associated cost (0034-0335; 0044-0055);
- modifying the proposed schedule responsive to the resource fluctuations and the cost (0034-0335; 0044-0055); and
- outputting the modified proposed schedule for the project (0034-0335; 0044-0055).

Examiner notes: Podrazhansky states that invention is for various aspects of scheduling and project management (paragraph 0027, 0033 and 0035). Staffing requirements are considered a task that needs to be done for a workload project. Podrazhansky teaches scheduling staffing (paragraphs 0032-0035 and 0051). Podrazhansky also teaches Queue staffing that enables the user to control time allotted to an individual performing a given task (paragraph 0055).

The scheduling mode, which converts workload volumes into the time it takes to complete the task dictated by the workload volume (paragraph 0045 and 0051) is the "load leveler" of the instant application by receiving data representative of tasks for a project and generate a proposed/future schedule of the task(s).

Podrazhansky teaches the ability to modify a schedule in an effort to minimize costs. Specifically, Podrazhansky teaches a Schedule Costing Module that enables the user to analyze and control the labor cost of the scheduled workload volume (paragraph 0053). The user can apply predetermined rules to workload volume and to use the cost calculation option tool to set thresholds (paragraph 0053). Controlling the costs using thresholds is one to minimize cost. Since the schedule is done with the minimized cost, the modified schedule is based on minimizing/controlling cost.

Podrazhansky does not teach that the proposed schedule is for the start times for a plurality of tasks. However, Castonguay teaches:

- at least one tasks of the plurality of tasks (generating tours for different management units, see at least column 3 line 10-30, which is dividing the project into a plurality of tasks)
- wherein the plurality of tasks are step in a workflow to complete the project (these tours for different management units combine together as the project of managing a force of workers to staff a call center, see at least column 1 line 13-24),

It would have been obvious to one of ordinary skill in the art at the time of the invention to divide the work into tours to optimize utilization of staff, see at least Castonguay column 2 line 48-50.

Castonguay further teaches:

- generating a proposed schedule of start times (see at least column 4 line 1-6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to schedule start time with motivation to enable a supervisor to make better decisions by visualizing occupancy and potential staffing problems, see at least Castonguay column 4 line 7-19.

As per claims 37, 43 and 50, the claims are evaluated above and reference to the shipbuilding can be seen in at least Podrazhansky paragraphs 0030-0031. These paragraphs show that Podrazhansky may be applied to a broad variety of organizations with different locality and corporate structure. Shipbuilding is not patentably distinct from the organizations described by Podrazhansky, thus, Podrazhansky teaches these limitations.

Examiner notes: The dependent claims have been modified to include parts of the independent claim taught by Castonguay. The portion to the dependent claims that Podrazhansky further teaches are outlined below. As described above, Castonguay teaches the following limitation in the dependent claims:

- at least one tasks of the plurality of tasks
- wherein the plurality of tasks are step in a workflow to complete the project
- generating a proposed schedule of start times

It would have been obvious to combine Podrazhansky and Castonguay with the motivation given above. Thus, the amended dependent claims are similarly rejected.

10. As per claims 12, 18, and 35, Podrazhansky further teaches:

- wherein evaluating the proposed schedule to estimate the associated cost further comprises using a dynamic programming model (0051+);

11. **As per claims 13, 19, and 36,** Podrazhansky further teaches**:**

- wherein evaluating the proposed schedule to estimate the associated cost further comprises using a linear programming model (0051+);

12. **As per claims 14, 39, and 40,** Podrazhansky further teaches**:**

- further comprising determining a minimum length schedule of tasks that uses at most a maximum number of resources to complete the tasks (0044+);
- wherein at least one of the tasks is subject to at least one constraint on the location of the task in the schedule (0044+);

13. **As per claims 15 and 41,** Podrazhansky further teaches**:**

- further comprising using a schedule packing algorithm (0053);

14. **As per claims 16 and 42,** Podrazhansky further teaches**:**

- further comprising determining for each of a plurality of tasks, each task having a plurality of possible start times, a start time for the task that results in a lowest estimated cost for the proposed schedule (0033+).

15. **As per claims 20 and 45,** Podrazhansky further teaches**:**

- wherein generating the proposed schedule includes associating a limitation with each of the resources and producing the proposed schedule responsive to each limitation (0046-0055);

16. **As per claims 21 and 46,** Podrazhansky further teaches**:**

- wherein generating the proposed schedule includes iteratively reducing the limitation for one of the resources and load-leveling the resources (col. 6, line 56 – col. 8, line 55);

17. **As per claims 22 and 47,** Podrazhansky further teaches**:**

- wherein evaluating the proposed schedule includes determining costs associated with the resource fluctuations (0044-0047; 0050-0055);

18. **As per claims 23 and 48,** Podrazhansky further teaches**:**

- wherein the costs associated with the resource fluctuations include at least one of the group of resource acquisitions costs, resource disposition costs, incremental costs for resource over-utilization, and incremental costs for resource under-utilization (0044-0047; 0050-0055);

19. **As per claim 24,** Podrazhansky further teaches**:**

- wherein resource acquisition costs include a hiring cost (0053-0054);

20. **As per claim 25,** Podrazhansky further teaches**:**

- wherein resource disposition costs include a firing cost (0053-0054);

21. **As per claim 26,** Podrazhansky further teaches**:**

- wherein incremental costs for resource over-utilization include an overtime cost (0053-0054);

22. **As per claim 27,** Podrazhansky further teaches**:**

- wherein incremental costs for resource under-utilization include an idle resource cost (0053-0054);

23. **As per claims 28 and 49,** Podrazhansky further teaches**:**

- wherein generating the proposed schedule comprises identifying an admissible window in the proposed schedule for each task and iteratively placing each task within the proposed schedule responsive to the admissible window, a priority of the task, and a cost of at least part of the proposed schedule having the task placed therein (0054);

24. **As per claim 29,** Podrazhansky further teaches**:**

- wherein evaluating the proposed schedule comprises examining one of the tasks to estimate the cost associated with the proposed schedule responsive to moving

the task within a window describing allowable locations of the task in the schedule (0051-0054);

25. **As per claim 30,** Podrazhansky further teaches**:**

- wherein the resource fluctuations are determined by using a profile for each of the resources (0053-0054).

26. **As per claims 38, 44 and 51,** Podrazhansky further teaches**:**

- Wherein the tasks comprise welding, painting, electrical work, or any combination thereof (0030+);

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Tran whose telephone number is 571-270-1832. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Kramer can be reached on 571-272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thuan Tran
Patent Examiner
4-16-2009

/Stefanos Karmis/
Primary Examiner, Art Unit 3693